

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002819**Date Inspected:** 30-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

Production Monitoring Test

The Quality Assurance Inspector monitored the Production Monitoring Tests (PMT) for the OBG Deck Panels U-rib welding. The weld joint is a single bevel Partial Joint Penetration (PJP) weld that joins the U-rib to the deck plate. The Production Monitoring Test (PMT) is performed prior to the production of the Deck Panels (DP). PMT #1 consists of (2) ribs totaling (4) weld joints, numbered 1 thru 4. Welding was performed on Gantry 2, and represents production for Deck Panels DP-543-001 and DP-548-001. Welding was performed in accordance with welding procedure specification WPS-B-T-2342 (Dual Process GMAW root pass SAW fill and cover pass). The parameters and welders were recorded in an on site log for future review.

ZPMC Quality Control performed visual inspection of the GMAW weld pass and the subsequent SAW weld pass. ZPMC QC rejected the PMT due to lack of penetration located during Ultrasonic examination.

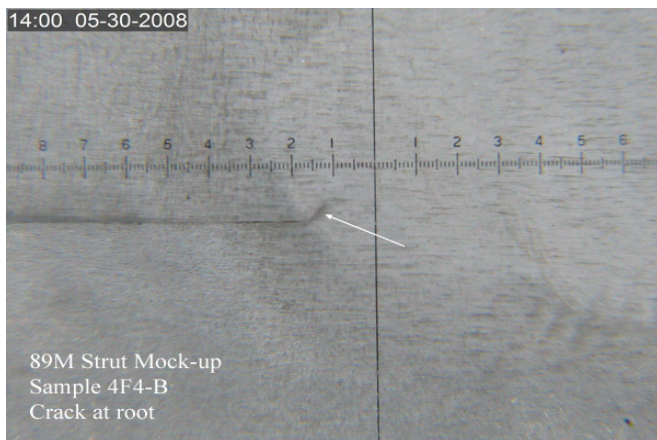
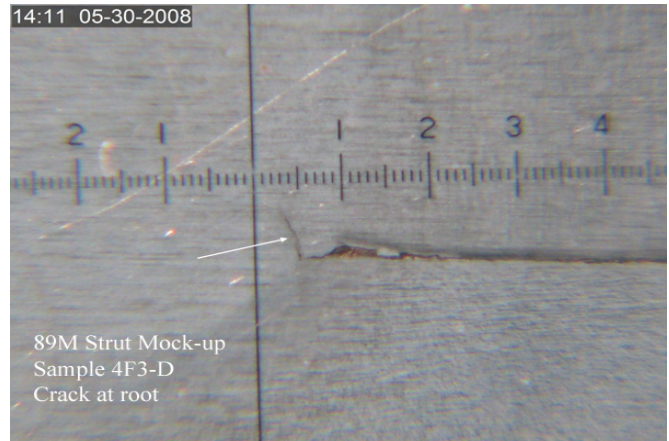
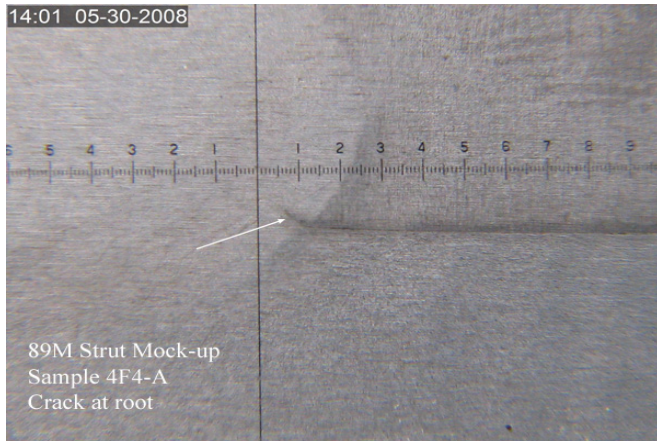
89M Strut Mock-up Macro Samples

The Quality Assurance Inspector evaluated the 89M Tower Mock-up strut macro samples. ABF Representative Mike Williams, ZPMC Quality Control Inspector Xie Ping, Assistant Structures Representative Josh Ishibashi, and Quality Assurance Task Leader Robert Cuellar were present during the review. There were eight samples with a total of twelve welds. ABF and ZPMC reviewed the samples the previous day and stated two welds were found

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unacceptable. One sample was rejected for a linear indication and one for incomplete fusion. The Quality Assurance Inspector reviewed the samples and recorded four samples with cracks in the root and one sample with incomplete penetration. After some discussion, the Quality Assurance Inspector, Mr. Williams, and Xie Ping all agreed on the Quality Assurance Inspectors findings. The Quality Assurance Inspector recorded the results of the evaluation and photographed the samples. The data was forwarded to Assistant Structures Representative Josh Ishibashi for review. Below are three digital photographs illustrating three of the cracked fillet welds.



Summary of Conversations:

As stated in the contents of the above report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh (916) 227-5719, who represents the Office of Structural Materials for your project.

Inspected By: Bertlesman,Greg

Quality Assurance Inspector

Reviewed By: Cuellar,Robert

QA Reviewer